

Climatological Data for January, 1910.
DISTRICT No. 12, COLUMBIA VALLEY.

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GENERAL CLIMATOLOGICAL CONDITIONS.

The temperature was about normal in the northern half and considerably below normal in the southern half of the district, while the precipitation, although quite variable in localities, was, on the whole, nearly normal. The depth of snow in the mountains was increased slightly by new accumulations, but the increase at the headwaters of the streams in Montana and Wyoming was insufficient to more than overcome the loss by melting, evaporation, and settling, so the depth in these States at the end of the month was less than usual, and the spring flow from the streams in the Bitter Root and Cabinet mountains will be small unless the deficiency is overcome in February or March.

Between the 1st and the 11th the weather was controlled by a large high pressure area that moved slowly from British Columbia southeastward to the Great Salt Lake Basin, and the passage eastward of low pressure areas from the ocean was blocked. During the greater portion of this period the pressure gradients favored the occurrence of easterly winds, and a large quantity of cold air drained into the valleys. The minimum temperatures of the month were registered at most places during this period. On the 1st and 2d high northerly winds prevailed in the Puget Sound drainage area, and, owing to the direction being such an abnormal one, quite a number of minor casualties occurred in the harbors at Seattle and Tacoma, both of which are open toward the northwest. Ships broke their cables or dragged their anchors and fouled one another; piles were torn loose by the wind and waves and driven against trestles which they battered down. The damage was considerable, but no lives were lost which, in view of the severity of the gale, is remarkable.

On the morning of the 12th a low pressure area appeared off the north Pacific coast, of sufficient strength to break up the cold spell, and from this date to the end of the month milder weather prevailed. The low pressure area on the 12th was attended by high winds near the coast, and 2 ships were wrecked. One, the steamer *Czarina*, an iron vessel of 1,045 gross tons, was loaded with coal and bound from Marshfield, Oreg., to San Francisco. The vessel went ashore shortly before noon on January 12 near the north entrance to Coos Bay on the Oregon coast. The ship, cargo, and 24 lives were lost in this disaster. The other was the ship *William H. Smith*, of 1,978 gross tons, loaded with heavy timbers and bound from Chemainus, B. C., to South Africa. She lost her topgallant yards at 2:00 p. m. on January 13 when about 400 miles west-southwest of Cape Blanco, and shortly afterwards the main mast fell across the deck and the seams of the vessel opened so that she became water-logged. She was afterwards picked up by a tug and towed to Seattle without the loss of any lives.

The weather was stormy with high winds on the 17th and 18th, but no casualties occurred in connection with this storm, and during the remainder of the month there was a preponderance of high pressure areas over the Great Salt Lake Basin, which influenced the weather in the Columbia Valley by causing temperatures sufficiently low to prevent much melting of snow, and in the lowlands it stayed on the ground a longer period of time and covered larger areas than usual.

In nearly all localities winter wheat and alfalfa were well protected by snow, and no fears are entertained that these crops have been injured to any great extent by cold weather. The Idaho section director reports that peach buds and some young peach trees were killed by low temperatures in the southwestern valleys of that State, but he further remarks

that there had been no warm periods prior to the cold spell to start the buds prematurely, and consequently the damage is probably less than expected.

Stock has suffered greatly by exposure, but the losses have been small on account of the general feeding, which was not done, however, without heavy expense both for labor and for feed. Considerable corn was imported for this purpose, and the large amount of hay used has so depleted the quantity held in reserve that the price has gone up until its purchase has become almost prohibitive. Sheep suffered the most, and many of them got sore mouths by trying to nibble grass that was frozen or crusted with snow; in Idaho a few bands of sheep were snowed in where feed was unobtainable, and the losses in these cases were heavy.

Building operations, in all localities, were greatly hampered by the cold weather, but the city of Boise, Idaho, suffered the most through stress of weather on account of the Horseshoe Bend power plant being obliged to shut down early in the month. Their transmission line broke during a heavy snow storm, and soon afterwards their diverting canal was seriously damaged by gophers. By the time the repairs were completed the river bed and diverting canal had become so choked with anchor ice that there was not enough water to operate the plant. The difficulty was aggravated by the breaking of the ice chute designed to keep mush ice from entering the diverting canal, and the shut-down interfered materially with the lighting systems at Boise and Emmet, with the operation of the city street cars of the Boise Railroad Company, and with the suburban and interurban service of the Boise Valley Railway Company, all of which use the power from this plant.

Railway transportation was not seriously interrupted by drifting snow, but thawing weather in Montana on the 22d caused a number of snow slides in the neighborhood of Highgate, which the engineers of the Great Northern Railway claim were the most extensive of any they have had to contend with in many years. One of these slides covered the railway track in places to a depth of 50 feet, and for a distance of 400 feet. It required a large force of men several days to clear the road so that traffic could be resumed. During this time all trains had to make a detour of 200 to 300 miles over branch and connecting lines in order to proceed to, and return from, the Pacific coast. Several workmen were caught in one of the smaller slides in the same locality, and 2 of them were killed. These slides partook of the nature of avalanches, and besides bringing down large quantities of snow, they also brought down quantities of dirt and many large rocks, which made the work of clearing the track much more laborious.

On the 18th and 19th, and again on the 23d and 24th, floods occurred in a few small streams in Oregon and Washington, due to heavy rains and thawing weather; the damage done by these floods was small, and the areas affected were limited, therefore they did not attract much attention.

TEMPERATURE.

The mean temperature as obtained from 226 stations was 27.7° , and it was below normal in nearly all sections. The greatest departures were in the Snake River Valley where the average temperatures were 2° to 7° below normal. In the Columbia Valley, from the headwaters of the branches in Montana to the mouth of the Spokane River in Washington, the mean temperatures, as a rule, were slightly above normal. In the bottom lands from the mouth of the Spokane River to The Dalles, in Oregon, the mean temperatures were 2° to 6° below normal, while elsewhere the departures were less, but in

nearly all cases were slightly below, rather than above, the normal. The warmest section was near the mouth of the Umpqua River in Oregon, where mean temperatures of 40° or more occurred. It was coldest at the headwaters of the Salmon River, which rises in the Bitterroot Mountains in Idaho; and was very nearly as cold at the headwaters of the Snake River in Yellowstone Park, and at the high-level stations in the Blue Mountains in Oregon. Most of the minimum temperatures at the different stations occurred during the first week, and most of the maximum temperatures at the beginning of the third decade. During the early part of the month the cold air draining into the valleys caused lower temperatures at low elevations than at the stations in the highlands, and a severe cold wave, lasting for several days, was experienced in the Snake River Valley, between Weiser and Pocatello. The highest mean temperature was 44.8° at Gardiner, near the mouth of the Umpqua River in Oregon, and the lowest mean temperature was 9.8° at Salmon, near the headwaters of the Salmon River in Idaho. The elevation of Gardiner is 72 feet, and Salmon is 4,040 feet above the sea. The highest temperature was 66° at Gardiner on the 30th, and the lowest was -36° at Salmon on the 3d.

PRECIPITATION.

The average precipitation as obtained from 331 stations was 3.89 inches, which is very nearly the normal amount. There was an excess of about 2 inches along the coast, while in the interior the distribution varied greatly, some places having an excess while localities near by had a deficiency. This uneven distribution was due to the preponderance of anticyclone weather and the absence of general storms, thereby causing the precipitation to be local and largely influenced by topography. The cold weather during the first decade was attended by rather heavy falls of snow in the valleys and on the windward slopes of the hills and mountains, while on their leeward slopes the fall was much lighter. In the coast counties the precipitation, which was mostly in the form of rain, ranged between 10 and 20 inches; between the Coast and Cascade ranges of mountains the average was about 4 inches, while to the east of the Cascade Mountains the amounts ranged between 1 and 5 inches, being generally between 1 and 2 inches in the lowlands, and ranging from 2 to 5 inches in the highlands with the greatest amounts at the very highest elevations. There was scarcely a day on which precipitation in measurable quantities did not fall at some station, but there were no distinctively wet and dry periods. More than the usual amount of cloudiness prevailed in the dry sections of the district, and in the wet sections there was more than the usual amount of sunshine. The greatest monthly precipitation was 22.79 inches at Glenora, which is a station in the Coast drainage area in Tillamook County, Oreg., and the least monthly amount was 0.15 inch at Buhl, Idaho, in the upper Snake River drainage basin. The greatest 24-hour fall was 4.40 inches at Glenora, Oreg., on the 18th. Other heavy 24-hour falls occurred as follows: Baker, Wash., 3.46 inches; Clearwater, Wash., 3.40 inches; Quinault, Wash., 3.30 inches; Gold Beach, Oreg., 3.20 inches; and Hoover, Oreg., 3.00 inches.

RIVER CONDITIONS.

The average stage of the Columbia was a little more, and of the Willamette a little less, than 2 feet below that for the previous month. The Columbia, from The Dalles, Oreg., to Kennewick, Wash., was 0.7 of a foot higher than usual for this period, while both the upper and the lower Columbia and their larger tributaries were lower, the Willamette River being almost 2 feet lower than it generally is at this time of the year. The highest stages of the Columbia and the Willamette occurred on the 25th generally, but at a few stations they occurred a couple of days earlier or later. The Columbia was frozen over at Umatilla from the 1st to the 25th, and at Kennewick from the 3d to the 18th. Its stages at Vancouver, Wash., ranged

from 1.5 foot on the 5th to 8.0 feet on the 25th, and at Wenatchee, Wash., the river fell from 6.9 feet on the 1st to 5.0 feet about the middle of the month, this being the only station that reported a higher stage at the beginning of the month than at some time during the last decade. On the Snake River, at Lewiston, Idaho, the water rose from 1.5 foot on the 7th to 3.9 feet on the 27th. At Salem, Oreg., on the Willamette River, there was a rise from 3.1 feet on the 18th to 11.3 feet on the 25th. After the 25th of the month, there was a slight fall in all of the small streams. In Idaho continued low temperatures filled the streams with "mush ice." Some streams were frozen entirely over for the first time in many years; in other instances the "mush ice" solidified along the banks and bottoms, forming accumulations of anchor ice, which materially lessened the stream flow.

There was a great deal of floating ice in the Snake and the Columbia rivers, and for 3 weeks beginning on the 3d traffic was suspended between Portland and The Dalles, and for a portion of this time it was seriously impeded between Astoria and Portland. Several of the smaller streams in Oregon and Washington overflowed their banks during the month, the most notable instance being in the Touchet Valley, in Columbia County, Wash., on the 18th and 19th, where there was a flood caused by rains and melting snow. Some ranches were flooded, a few cattle drowned, and trains were delayed. Floods were general in the streams of Columbia and Walla Walla counties, Wash., at this time, and at Dayton the waters of the Patit and the Touchet rivers entered the main streets, and shut off traffic with the outside world, temporarily. A few cattle were drowned in the outlying districts during this flood. On the night of the 18th, the ice jam on the Walla Walla, at London, broke, causing the river to overflow, and damage was done to ranches that were flooded. A small flood, the result of Chinook conditions, caused Wilbur Creek, in Lincoln County, Wash., to overflow its banks on the 23d and 24th. Cattle were lost and ranches inundated. None of the larger streams in this district overflowed their banks during January.

MISCELLANEOUS.

The Trowbridge-Niver Company, of Chicago, has the contract for building a large storage reservoir on Owyhee River, 60 miles from its confluence with the Snake River. This company will start work early in February and push operations as fast as permitted by the weather. The reservoir will be used in irrigating land in Malheur County, Oreg., and ultimately it is expected that nearly 200,000 acres will be benefited by the improvements contemplated in that locality. A small portion of the land is now being irrigated and the formation of a new district was necessary before any extensions could be made. This has been done, and practically every water user in the locality has joined the new organization.

The engineering work is practically complete on the irrigation project of the Owyhee Land and Irrigation Company. This project includes a dam across Castle Creek, in Owyhee County, Idaho, which will be approximately 1,500 feet long at the top, and 200 feet high over the creek bed, and which will require to complete 2,722,370 cubic yards of material. The reservoir formed by the dam will cover 700 acres, and will impound 53,000 acre-feet. The streams furnishing the water have their source in the Owyhee Mountains, which rise in places above 8,000 feet. It is proposed to irrigate 43,000 acres, of which 30,000 acres are segregated under the Carey Act. This land lies along the south side of Snake River and along Castle and Birch creeks. It slopes toward the northeast and is smooth except where broken by a series of high ridges coming down from the foothills of the Owyhees. Between these ridges are sheltered coves. The region has perhaps as mild a climate as any part of the State, and promises well as a fruit-growing section. The soil is apparently of sedimentary origin, and where crops have been grown it has proven very productive.

TABLE 1.—Climatological data for January, 1910. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, 0.1 inch or more.	Number of clear days.	Number of cloudy days.		
<i>Montana.</i>																			
Anaconda.	Deer Lodge.	5,300	9	21.5 ^a	.....	50 ^a	23	-20 ^a	3	31 ^a	0.77	.....	8.9	6	12	15	4	C. D. Demond.
Bison.	Powell.	7,240	50	24	-19	3	33	2.55	+ 0.49	0.34	19.0	9	12	13	6	C. H. Anderson.
Columbia Falls.	Flathead.	3,100	16	21.8	- 0.7	50	24	-21	3	33	2.55	+ 0.49	0.48	13.2	10	7	1	23	Mrs. I. M. Kennedy.
Como ^{**} .	Ravalli.	2	26.6	52	23 ^a	- 5	4	26	1.04	0.55	12.0	4	7	18	6	Hiram Platt.
Darby.	do.	3,825	1	6	W. A. Kerlee.
Dayton.	Flathead.	2,800	6	19.4	46	23 ^a	-20	3	29	0.47	6.19	5.0	4	12	15	4	W. C. Frost.
East Anaconda ^a .	Deer Lodge.	5,500	5	20.2	48	27	-22	2 ^a	45	1.70	0.38	14.8	15	10	1	20	C. D. Demond.
Fortine.	Lincoln.	2,975	4	20.2	57	22	-23	3	48	0.93	0.37	6.2	9	4	20	7	Mike Petery.
Hamilton.	Ravalli.	3,575	7	25.4	.....	50	22	-23	3	48	0.93	.....	0.24	0.6	8	16	5	J. B. Currie.
Hat Creek.	Powell.	6,000	.....	.....	.....	49	22	- 8	3	30	0.70	.....	0.38	12	2	13	16	M. K. Landreth.
Kalispell.	Flathead.	2,965	11	22.5	+ 2.9	49	22	- 8	3	30	0.78	- 0.81	0.19	3.8	12	2	13	16	U. S. Weather Bureau.
Lost Creek.	Deer Lodge.	5,200	.....	.....	.....	48	23	-10	3	33	3.07	.....	0.68	.....	.....	.....	.....	Frank Henault.
McGinnis Meadows.	Lincoln.	53	22	-15	3	30	0.61	- 0.88	0.20	4.2	9	1	10	5	H. L. Beebe.
Missoula.	Missoula.	3,225	32	21.8	+ 0.7	53	22	-15	3	30	0.61	- 0.88	0.20	4.2	9	1	10	5	U. S. Weather Bureau.
Ophir.	Powell.	8,800	.....	.....	.....	51	23	-22	3	38	1.27	.....	0.30	0.5	1	10	6	E. S. Wilton.
Osvaldo.	do.	4,207	10	13.0	- 2.3	43 ^a	31	-32 ^a	3	52 ^a	2.02	+ 0.24	0.30	20.2	16	1	10	5	S. B. Muchmore.
Philipsburg.	Granite.	5,275	7	19.6	.....	51	23	-22	3	38	1.27	.....	1.10	0.5	3	14	12	G. T. Bramble.
Plains.	Sanders.	2,475	12	24.3	- 1.4	50	23 ^a	- 4	3	33	0.30	- 0.67	0.10	2.0	3	15	1	M. H. Pierce.	
Pleasant Valley.	Flathead.	3,500	3	18.6	.....	46	22	-26	3	44	1.60	.....	0.43	8.0	12	9	12	A. D. Stillman.
Polson.	do.	2,920	2	25.5	.....	51	22	- 3	31	20	0.99	.....	0.42	2.0	4	1	18	F. P. Brown.
St. Ignatius.	Missoula.	2,700	4	24.4	.....	56	22	- 9	3	30	0.66	.....	0.42	4.2	8	3	9	U. S. Reclamation Service.
St. Regis.	do.	2,650	2	23.0	.....	48	23	-10	3	33	3.07	.....	0.71	11.4	11	1	25	R. D. Lee.
Saltese.	do.	3,600	6	.....	.....	50	23	-10	3	33	5.84	.....	0.95	50.0	14	12	1	E. K. Tarbox.
Snowshoe.	Lincoln.	4,500	4	19.1	.....	42	23	- 9	3	23	0.17	.....	1.11	66.1	19	1	21	J. C. Riter.
Troy.	do.	1,880	14	25.6	+ 0.4	50	24	-10	3	45	4.99	+ 2.00	1.15	21.5	15	10	3	W. E. Milnor.	
Upper Lake McDonald.	Flathead.	3,200	2	22.2 ^b	.....	42 ^a	20	- 6 ^b	29	38 ^b	3.26	.....	0.68	.....	13	3 ^b	5 ^b	F. F. Liebig.
<i>Wyoming.</i>																			
Afton.	Uinta.	6,200	6	16.8	.....	46	2	-23	13	41	0.90	.....	0.60	9.0	3	23	1	A. V. Call.
Alta.	do.	1	16.4	.....	.....	48	24	-31	5	43	1.84	.....	0.48	23.4	14	10	6	Mrs. Lucy Brown.
Bedford.	do.	5,900	10	15.6	- 2.4	47	24	-26	5	43	1.17	- 0.79	0.31	10.8	8	7	6	C. G. Heiner.	
Snake River.	Yellowstone Park.	7,000	4	.....	.....	.....	.....	.....	.....	.....	5.40	.....	.....	.....	.....	.....	.....	U. S. Army.
<i>Nevada.</i>																			
San Jacinto.	Elko.	47	31	0.43	0.36	9.5	2	13	0	18	Moses Jones.
<i>Utah.</i>																			T. B. Jones.
Standrod.	Boxelder.	6	23.5	.....	.....	52	22	- 7	5	33	1.47	.....	0.58	1.9	7	19	6	H. Warder Lewis.
<i>Idaho.</i>																			G. A. Axline.
Atlanta.	Elmore.	5,500	4	50	23 ^a	-15	6	42	1.75	1.00	20.0	5	4	13	14	Wm. L. Eanes.
Albion.	Cassia.	8	23.7	.....	.....	50	23 ^a	-15	6	42	1.75	.....	0.87	15.0	4	17	7	O. H. Barber.
Almo.	do.	2	.....	.....	.....	.....	.....	.....	.....	.....	1.64	.....	.....	.....	.....	.....	.....	E. A. Dowd.
American Falls.	Oneida.	4,341	48	24	-23	6	39	0.98	+ 0.10	0.58	14.0	11	4	10	8	N. W. Irfield.
Blackfoot.	Bingham.	4,503	15	15.4	- 7.3	48	24	-23	6	39	0.98	+ 0.10	0.58	14.0	11	4	10	8	Mrs. Belle Hess.
Blackfoot Dam.	do.	2	13.8	41	24	-25	13	40	1.83	0.71	24.0	14	2	18	11	William Bock.
Blanche.	Lincoln.	3	.....	.....	.....	.....	.....	- 9	4	.....	2.09	.....	0.46	24.4	14	6	0	F. P. Ingraham.
Bock's Ranch.	Elmore.	3,500	.....	.....	.....	48	24	-23	6	39	1.11	.....	0.46	24.4	14	6	0	U. S. Weather Bureau.
Bogus Creek.	Boise.	4,200	3	24.2	- 5.1	51	31	- 8	4	35	1.55	- 0.34	0.58	17.6	18	2	8	21	W. H. Heideman.
Bonneville Ferry.	do.	1,850	4	25.2	49	24	- 7	3	37	1.74	0.49	11.0	12	6	15	10	Patrick Moriarty.
Boulder Mine.	Boise.	4,800	.....	.....	.....	48	24	-10 ^a	8	37 ^a	0.15	.....	0.86	82.5	17	10	8	H. J. Idema.
Buhl.	Cassia.	3,800	4	22.9 ^a	.....	47 ^a	15 ^a	-10 ^a	8	37 ^a	0.15	.....	0.10	5.0	2	17	7	W. Alvin Hall.
Burke.	Shoshone.	4,082	3	22.2	.....	44	23	- 8	3	26	5.71	.....	1.05	58.5	18	7	19	Prof. Wm. J. Boone.
Caldwell.	Canyon.	2,372	6	22.8	.....	46	24	-21	3	40	1.10	.....	0.33	14.5	10	2	12	Mrs. Edna Faulkner.
Camas.	Fremont.	4,815	2	7.7	.....	42	25	-33	6	44	1.11	.....	0.60	11.5	8	14	9	Chas. H. Shepherd.
Cambridge.	Washington.	2,651	13	16.7	- 0.0	41	24	-27	3	41	3.38	+ 0.33	0.91	37.3	15	1	20	Chas. S. West.	
Chesterfield.	Bannock.	5,424	.....	.....	.....	48	24	-13	3	28	1.40	.....	14.5	.....	9	8	14	E. J. Hopkins.
Clawson.	Fremont.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Hedrick.
Cœur d'Alene.	Kootenai.	2,157	.....	.....	.....	44	24	-15	3	40	4.90	- 0.28	0.25	6.5	3	15	8	Mrs. Gertrude Kerby.
Cottonwood Creek.	Boise.	4,000	3	18.7	.....	45	23 ^a	-25	3	43	2.00	.....	0.50	38.0	7	8	4	R. R. Richmond.
Cuidessac.	do.	4,300	3	18.7	.....	50	25	- 4	3	30	1.16	.....	1.00	11.0	5	11	10	H. M. Call.
Deary.	Nez Perce.	1,520	2	27.6	.....	48	24	-12	3	31	3.1	.....	52.5	.....	3	16	1	Emil Schuegler.
Driggs.	Latah.	.....	24.4	.....	.....	48	23	-12	3	31	3.1	.....	0.90	15.0	2	13	16	Walter H. Durrant.
Edie.	Nez Perce.	1,350	5	24.2	.....	42	24	0	3	28	3.26	.....	0.48	2.00	11	6	7	Geo. B. Edie.
Edwardsburg.	Fremont.	6,097	3	14.0	.....	45	24	-33	5	56	1.70	.....	0.80	21.0	5	16	10	W. A. Edwards.
Emmett.	Idaho.	4,500	10	15.0	.....	42	22	-26	3	39	1.32	.....	1.16	62.4	14	6	5	E. L. Marvin.
Forney.	Canyon.	2,350	4	22.2	.....	48	24	-13	3	28	1.40	.....	0.33	14.2	10	4	7	M. B. Merritt.
Garden Valley.	Lincoln.	3,600	22.8	.....	.....	48	31	-15	3 ^a	40	4.90	.....	0.80	43.0	12	1	19	Mrs. Gertrude M. Ross.
Garnet.	Elmore.	2,575	11	27.4	- 7.0	56	24	- 4	6	25	0.49	- 0.28	0.25	6.5	3	15	8	Asa K. Kenison.	
Gilbert.	do.	3,030	.....	.....	.....	46	21	- 9	4	35	0.50	.....	0.26	6.0	3	25	0	J. B. Loomis.
Glenns Ferry.	Elmore.	2,569	2	28.8	.....	53	24	-17	3	35	0.89	.....	0.41	4.5	6	11	8	I. E. Perkins.
Gooding.	Lincoln.	3,572	21	21.0	.....	45	24	-22	5	38	0.71	.....	0.64	6.0	8	1		

TABLE 1.—Climatological data for January, 1910. District No. 18—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>Idaho—Cont'd.</i>																					
Milner.	Cassia.	4,097	7	20.3	—	46	15†	—18	6	29	1.80	—0.24	0.60	16.0	6	16	15	0	e.	R. A. Hanson.	
Moscow.	Latah.	2,748	18	26.6	—2.4	46	23†	—12	3†	17	2.58	0.39	0.41	22.2	14	8	5	18	e.	University of Idaho.	
Mountainhomie.	Elmore.	3,150	5	23.4	—	50	24	—19	5	39	0.92	0.26	0.26	8.7	7	7	14	10	se.	Mrs. Ellen Manion.	
Murtaugh.	Cassia.	4	19.0	—	52	23	—22*	6	39*	1.17	—	0.26	14.0	6	8	18	5	w.	J. E. Steinour.		
Nes Perce.	Nes Perce.	3,183	25.2	—	48	23	—15	3	37	1.16	+ 0.57	0.61	10.2	44	20	0	11	s.	P. Mitchell.		
Oakley.	Cassia.	4,191	17	21.6	—7.6	52	23	—10	3†	43	1.50	+ 0.57	0.85	20.5	3	9	19	3	s.	John Adams.	
O'Hara Bar.	Idaho.	1,400	—	—	—	—	—	—	—	—	—	—	—	—	—	18	6	7	ne.	U. S. Forest Service.	
Orofino.	Nes Perce.	1,027	5	26.8	—	46	24	—1	3	29	2.56	—	0.53	14.0	4	8	16	7	—	Geo. Alteneder.	
Payette.	Canyon.	2,159	20	20.0	—9.0	42	23	—26	3	38	1.16	—0.42	0.27	11.0	11	4	5	22	n.	E. F. Allen.	
Pebble.	Bannock.	5,277	10	19.3	—	47	24	—17	5	49	2.64	—	0.90	12.1	7	6	10	15	sw.	Mrs. Fannie Say.	
Pierson.	Custer.	7,000	2	—	—	—	—	—	—	—	—	—	—	—	—	—	18	0	13	s.	David P. Clarke.
Pine.	Elmore.	4,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	8	17	—	Mrs. Jennie Potter.
Placerville.	Boise.	4,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	James McDevitt.
Pleasant Valley.	Ada.	3,000	3	21.6	—	46	24	—18	5	39	1.01	+ 0.45	0.45	9.2	9	8	2	21	se.	C. E. Friedrich.	
Pocatello.	Bannock.	4,483	11	20.7	—4.4	54	23	—15	6	31	1.46	+ 0.80	0.93	11.5	9	3	12	16	se.	U. S. Weather Bureau.	
Pocatello Nursery.	do.	5,396	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. Anna M. Wrensted,
Poplar.	Bingham.	2	17.5	—	42	23†	—34	5	46	—	—	—	—	—	—	—	—	—	—	—	Stanley Bybee.
Porthill.	Bonner.	1,665	22	22.4	—1.9	48	22	—9	3	27	1.35	—	1.71	0.40	21.0	16	10	1	20	—	H. A. French.
Powers Ranch.	Boise.	4,300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17	11	3	w.	Mrs. Mona B. Powers.
Pyle Creek.	do.	3,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	8	15	—	Walter L. Cole.
Rattlesnake Creek.	Elmore.	4,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	9	16	nw.	Richard M. Green.
Ruby Creek.	Boise.	4,400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15	1	15	w.	O. A. Hatter.
Rupert.	Lincoln.	4,204	4	19.0	—	48	24	—23	6	36	1.07	—	0.42	17.5	9	14	6	11	e.	Will Parry.	
Salmon.	Lemhi.	4,440	5	9.8	—	51	31	—36	3	43	0.80	—	0.21	9.8	8	16	2	13	n.	E. K. Abbott.	
Salmon River Dam.	Twin Falls.	2	23.6	—	46	22	—3	4†	25	—	—	—	—	—	—	—	12	11	s.	Arch M. Gilbert.	
Sheep Hill.	Boise.	5,000	2	—	—	—	—	—	—	—	—	—	—	—	—	—	10	10	19	—	Clifford M. Gardner.
Shoshone.	Lincoln.	3,988	2	10.4	—	40	24	—22	5	32	0.97	—	0.32	10.5	11	2	27	2	e.	O. A. Truman.	
Silver City.	Wyohee.	6,230	3	—	—	—	—	—	—	—	—	—	—	—	—	—	10	13	s.	A. D. Bradfield.	
Smith Prairie.	Elmore.	5,300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Wm. W. Newell.	
Soldier.	Blaine.	5,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	W. W. Leek.	
Sugar.	Fremont.	3	12.9	—	41	24	—25	3†	42	2.00	—	0.90	21.0	9	7	14	10	sw.	Geo. F. Webb.		
Sunnyside.	Elmore.	21.0	—	—	47	25	—13	6	43	0.45	—	0.25	8.2	4	9	14	9	se.	E. A. Wilmot.		
Tilden.	Bingham.	4,420	2	13.8	—	47	24	—27	3	57	1.30	—	0.50	15.0	6	8	14	7	sw.	Mrs. W. A. Edwards.	
Tripod Mountain.	Boise.	4,300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	6	14	—	Mrs. Verna Paddock.
Twin Falls.	Twin Falls.	3,825	5	20.4	—	48	24	—20	3†	33	1.35	—	0.40	17.0	12	0	30	1	se.	J. A. Waters.	
Vernon.	Fremont.	13	15.9	—3.2	39	31	—32	5	36	2.15	+ 0.44	0.33	28.5	14	7	12	12	c.	A. M. Slater.		
Wallace.	Shoshone.	2,728	3	25.8	—	44	22	—1	3	20	8.12	—	1.12	—	20	—	—	—	—	U. S. Weather Bureau.	
Wendell.	Lincoln.	3,400	2	21.5	—	48	24	—21	3	53	0.82	—	0.28	12.5	5	6	14	11	ne.	Chas. L. Dingler.	
<i>Washington.</i>																					
Aberdeen.	Chehalis.	163	19	37.4	—2.4	53	23†	17	2	21	14.39	+ 3.33	2.4	1.2	22	1	23	7	w.	Carl S. Weatherwax.	
Anacortes.	Skagit.	80	16	37.8	—1.0	54	23	—2	2	46	2.06	+ 0.72	1.12	0.18	7	13	11	—	Douglas Allmond.		
Baker.	do.	200	4	33.8	—	47	7	11	2	23	13.40	—	3.46	7.7	16	6	8	19	—	Robt. M. White.	
Bellingham.	Whatcom.	60	15	40.0	—0.1	71	24	15	1	31	3.65	+ 0.26	0.75	1.0	12	14	8	9	—	Sanford B. Mayhew.	
Blaine.	do.	53	13	35.8	—	50	24	12	4	21	6.23	+ 0.59	1.08	4.5	22	5	22	22	sc.	John W. Sheets.	
Blewett.	Chelan.	2,200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15	13	0	18	John W. Blewett.
Bremerton.	Kitsap.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	U. S. Navy Yard.	
Brewster.	Okanogan.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. H. F. Bertram.	
Bumping Lake.	Yakima.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	U. S. Reclamation Service.	
Cashmere.	Chelan.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Valley Power Co.	
Cedar River.	King.	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	George Landsburg.	
Centralia.	Lewis.	212	17	38.2	—0.3	58	22	15	2	24	8.55	+ 3.77	1.55	T.	20	4	8	19	s.	I. S. Turner.	
Cheney.	Spokane.	2,351	11	29.6	—	60	24	0	1	42	1.00	—0.99	0.60	10.0	3	16	7	8	ne.	Northern Pacific Ry.	
Clealum.	Kittitas.	1,930	11	23.6	—4.8	47	7	11	2	23	13.40	—	3.46	7.7	16	6	8	19	—	J. A. Balmer.	
Clearbrook.	Whatcom.	140	7	34.0	—	50	21	12	2	20	7.32	—	1.21	4.0	17	3	7	21	—	Geo. Gibbs.	
Clearwater.	Jefferson.	135	14	35.5	—3.9	50	25	18	2	28	22.23	+ 5.51	3.40	2.8	24	6	7	18	—	A. R. Ritchie.	
Colfax.	Whitman.	2,300	21	23.2	—	49	24	—13	4	29	1.55	+ 0.68	0.42	9.0	11	7	4	20	sw.	W. H. James.	
Colville.	Stevens.	1,035	10	23.2	+ 1.3	49	24	—13	4	29	1.55	+ 0.68	0.42	9.0	11	7	4	20	sw.	W. L. Sax.	
Conconully.	Okanogan.	2,300	10	23.8	+ 0.7	45	24	—8	3†	29	2.42	+ 1.19	0.57	14.2	5	20	6	20	—	Wm. Baines.	
Cowiche.	Yakima.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	U. S. Reclamation Service.	
Crescent.	Lincoln.	2,250	10	25.0	—1.7	46	24	—7	4	22	1.53	—0.29	0.17	5.5	14	12	5	14	s.	Otto Wollheber.	
Davenport.	do.	2,450	1	23.3	—	46	24	—8	4	26	0.79	—	0.14	6.0	13	12	7	12	e.	W. H. Reed.	
Dayton.	Columbia.	1,700	24	31.0	—1.8	50	24	—2	11	34	3.04	+ 0.20	0.67	10.0	13	7	6	18	—	W. W. Hendron.	
Detroit.	Mason.	30	2	37.3	—	55	22	19	3	18	11.58	—	3.00	1.0	23	7	5	19	s.	Walter O. Eckert.	
Dixie.	Walla Walla.	5,000	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	T. Z. Andrews.	
Duckabush.	Jefferson.	380	2	36.8	—	45†	23†	13	2	19	—	—	—	—	—	—	—	—	—	E. J. Finch.	
East Sound.	San Juan.	500	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Benj. E. Harrison.	
Ellensburg.	Kittitas.	1,571	23	21.4	—3.9	46	30	—10	3	31	1.13	—0.36	0.57	5.6	5	9	7	15	e.	R. Lee Barnes.	
Ephr																					

TABLE 1.—Climatological data for January, 1910. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeasured.	Number of rainy days, .01 inch or more.	Number of partly cloudy days.	Number of cloudy days.
Washington—Cont'd.																
Moxee.	Yakima.	1,000	18	27.0	-2.8	58 30	-7	37 35	0.87	-0.61	0.40	4.1	9	4 12 15	.....	Henry B. Scudder.
Newport.	Stevens.			22.4		44 24†	-15	33 36					8	7 16	.....	Chas. M. Talmadge.
North Head.	Pacific.	211	8	30.0	-3.8	52 23	21	2 15	10.94	+ 4.26	1.47	0.1	25	5 0 26	e.	U. S. Weather Bureau.
Northport.	Stevens.	1,950	11	24.4	+ 1.4	53 30	-12	4 40	0.98	-0.01	0.20	8.0	11	10 14 7	.....	John Palm.
North Yakima.	Yakima.	1,076	1	27.5		58 30	0	4 28	0.73			0.37	3.8 8	9 7 15	e.	Albert Bender.
Nutland.	Klickitat.			30.2		57 30	7	3 22	1.43			0.35	3.6 10	6 19 6	sw.	J. R. Shepard.
Odessa.	Lincoln.	1,540	7	26.4		50 31	-2	4 34	1.05			0.50	4.5 5	6 19 6	sw.	Cecil S. Willis.
Olga.	San Juan.	50	20	38.5	-1.1	55 23	18	1 17	5.47	+ 2.24	1.47	0.16	18	3 7 21	se.	M. O'Connor.
Olympia.	Thurston.	200	32	36.9	-1.8	55 22†	16	2 22	10.19	+ 2.28	2.95	2.5	25	5 ^a 7 ^a 18 ^a	sw.	Wm. U. Neely.
Omak.	Okanogan.			22.1 ^b		44 ^b 19	-10 ^b	47 27	1.80			0.90	9.2 8	3 11 18	s.	Samuel Gruell, sr.
Oroville.	do.	922	1	25.7		47 30	0	6 22	1.09			0.55	4.0 6	12 6 13	s.	Peter McClung.
Peota.	Garfield.	5,000	1						2.12			0.32	21.7 19	8 8 15	sw.	U. S. Weather Bureau.
Pomeroy.	do.	1,500	18	29.2	-5.0	57 22	2	11 23	1.97	-0.32	0.01	7.5 5	8 12 7	w.	Frank Plummer.	
Port Crescent.	Clallam.	259	15	36.2	+ 0.2	53 13	17	2 22	6.57	+ 1.04	2.30	4.8	21	1 12 18	s.	State Agricultural College.
Port Townsend.	Jefferson.	80	20	38.9	+ 0.2	55 22	20	3 16	2.05	-0.17	0.42	T.	17	7 2 22	se.	A. V. Higley.
Pullman.	Whitman.	2,550	18													Geo. B. Stocking.
Quinault.	Chehalis.	300	3	35.6		49 12	16	2 19	21.57			3.30	1.0 26	3 9 19	se.	James W. Nicol.
Republic.	Ferry.	2,628	10	21.4	-3.3	49 22	-13	3 29	1.10			0.38	7.0 9	12 19 15	nw.	Northern Pacific Ry.
Rex Creek.	Chelan.	1,135	3	30.8 ^m		48 ^b 28	11 ^m	2 22 ^m					5 ^j 0 ^j 15 ^j		P. M. Ramsey.	
Ritzville.	Adams.	1,825	11													Hans Mumm.
Rock Lake.	Whitman.	1,750	4	27.6 ^a		48 22†	8	3 ^j 25	1.35			0.23	5.3 10	13 1 17	s.	Maggie Russell.
Rosalia.	do.	2,425	18	28.0	-0.8	49 24	4	3 ^j 21	2.04	+ 0.52	0.49	6.0	16	3 13 15	sc.	J. V. Prosser.
Russells Ranch.	Yakima.	2,870	1													U. S. Weather Bureau.
Scenic Hot Springs.	King.	2,021														Mrs. H. L. Devin.
Seattle.	do.	123	10	39.0	-0.3	55 23	22	3 13	5.08	+ 0.56	1.03	2.5	22	4 7 20	se.	C. E. Comstock.
Sedro-Wooley.	Skagit.	38	13	36.4	-1.9	53 22	10	2 20	4.40	-0.78	0.80	20	5 6 26		Skagit Power Co.	
Sixprong.	Klickitat.	1,240	3	29.6		56 30	3	3 22	0.91			0.24	3.1 10	3 5 23	sw.	Warren Hodge.
Skagit Power Dam.	Whatcom.	123														O. N. Wiswell.
Snohomish.	Snohomish.	50	16	36.4	-2.2	53 21	12	2 21	4.50	-0.21	1.45	2.0	16	3 2 26	se.	Geo. M. Snyder.
Snoqualmie Falls.	King.	667	11	36.2	-1.2	55 23†	14	2 16	7.15	-1.01	1.74	21	17	0 14		Miss Winifred Eichner.
Snyders Ranch.	Okanogan.	2,200	1						2.66			0.54	29.0 ^j	10 11 14	6	U. S. Weather Bureau.
South Bend.	Pacific.	16	15													University of Washington.
Spokane.	Spokane.	1,943	29	28.2	+ 1.5	48 22	3	6 18	1.28	-1.02	0.28	4.9 16	3 5 23	s.	Amos Stokes.	
State University.	King.	170	1	37.0		52 22†	18	2 14	5.95			1.07	5.5 21	8 6 17	se.	U. S. Forest Service.
Stokes Ranch.	Okanogan.	2,670	1						2.50			0.49	28.0 8	11 9 11	se.	H. E. Thompson.
Sullivan Lake.	Stevens.	2,700							2.43			0.33	17.2 16	9 0 22		U. S. Reclamation Service.
Sumner.	Pierce.	77	2	36.5		53 30	13	3 13	6.28			1.83	1.2 19	5 10 16	n.	U. S. Weather Bureau.
Sunnyside.	Yakima.	740	15	30.0	-0.4	62 30	4	3 31	1.79	-0.14	0.37	2.5 7	6 11 14	w.	Do.	
Tacoma.	Pierce.	213	24	38.6	+ 0.5	54 22	22	5 17	7.66	+ 1.88	2.06	0.6 22	4 5 22	sw.	U. S. Reclamation Service.	
Tatoosh Island.	Clallam.	86	25	40.1	-1.1	53 23	30	2 15	11.05	-1.11	2.15	1.6 24	4 2 25	e.	Do.	
Tieton.	Yakima.	2,000	1	23.4		50 30	-3	3 23	3.19			0.90	10.2 14	12 4 15	e.	U. S. Reclamation Service.
Touchet.	Walla Walla.	556	3	29.4		55 24†	2	3 22	1.40			0.63	5.1 10	8 9 16	se.	D. W. Dorrance.
Touchet Ridge.	Columbia.	2,500	1						5.56			1.10	46.0 7	7 3 21	sw.	R. H. King.
Trinidad.	Grant.	900	6	25.6		53 30	0	3 ^j 26	1.82			0.67	5.0 7	10 5 16	e.	J. C. Wheeler.
Twisp.	Okanogan.	1,619	7													J. S. Allen, jr.
Tyee.	Chelan.	2,000	1						3.88			1.32	25.2 12	5 10 16	w.	Elias McCreas.
Vancouver.	Clarke.	100	35	35.8	-1.9	53 24	15	4 4	6.47	+ 0.74	1.47	7.0 23	4 1 26	s.	A. Quarnberg.	
Vashon Island.	King.	116	21	38.3	-0.2	53 22†	23	5 16	7.50	+ 2.05	1.52	0.0	22	3 21	s.	Miss Gertrude McClinton.
Wahluke.	Grant.	410	6	29.3		58 30	1	4 26	0.82			0.62	1.4 6	10 10 11	se.	F. C. Koppen.
Wallace.	Okanagon.	4,006	1						2.39			0.66	15.7 12	3 11 17	s.	G. A. Wallace.
Walla Walla.	Walla Walla.	1,000	26	31.2	-2.0	61 23	7	3 24	4.42	+ 0.41	0.80	8.2 14	4 4 23	sw.	U. S. Weather Bureau.	
Waterville.	Douglas.	2,624	20	10.4 ^a	-2.5	54 ^a 30	-12	3 28	1.17	-0.55	0.52	5.8 7	14 6 11	sw.	O. R. Hopewell.	
Wenatchee (near).	Chelan.	1,169	11	24.2	-2.5	47 30	1	5 24	1.40	-0.45	0.38	7.5 12	5 10 16	w.	Geo. A. Pitcher.	
West Branch.	Lincoln.	2,203	11	23.9	+ 0.2	48 23	-7	4 25	1.65	-0.21	0.75	8.0 8	8 8 20	s.	U. S. Forest Service.	
Wilbur.	Cowlitz.	375	3	36.2		51 20	11	2 27	15.75			2.85	25.5 21	9 5 17	sw.	Rollin J. Reeves.
Zindel.	Astoria.	715	8	33.2		56 24	8	3 ^j 27	2.32			1.82	4 12 10	9 9 n.		L. F. Williams.
Oregon.																M. W. Zindel.
Albany.	Linn.	214	28	37.5	-1.6	55 23	15	3 ^j 18	8.54	-0.73	0.90	1.0 20	5 5.5 12	1 10 20	se.	F. M. French.
Ashland.	Jackson.	1,940	22	36.9	-1.6	60 23	15	3 29	1.27	-1.76	0.30	5.5 12	1 10 20	se.	F. H. Carter.	
Astoria.	Clatsop.	11	48	41.7 ^b	+ 1.8	53 ^b 21	31 ^b	9 14 ^b								Irving Club.
Baker City.	Baker.	3,466	20													U. S. Weather Bureau.
Bay City.	Tillamook.	14	15	40.8 ^a	-2.6	60 ^a 21	18	5 24	15.24	+ 1.10	2.25	T.	27	5 1 25	se.	J. O. Bozarth.
Bend.	Crook.	3,629	8						0.65			0.43	5.5 7	4 16 11	ne.	F. O. Minor.
Birch Creek.	Wheeler.	2,900	1	30.5		55 30	-4	3 26	0.65			0.98	6.0 11	9 11 11	sw.	F. S. Matteson.
Black Butte.	Lane.	1,200	9	34.8		48 23	10	3 24	4.45			0.52	2.5 6	3 7 21	w.	William Harris.
Blalock.	Gilliam.	235	11	30.9	-5.1	59 30	9	3 25	1.24	-0.15	0.36	2.5 6	3 7 21	w.	Geo. W. Long.	
Buckhorn Farm.	Josephine.	1,300	12	36.1	-3.6	61 30	11	5 26	10.02	-3.54	1.66	15.5 17	7 0 24	s.	E. F. Meissner.	
Cascade Locks.	Hood River.	100	19	32.0	-5.2	52 30	11	4 17	13.42	+ 1.50	2.08	25.0 19	8 6 17	sw.	Val. W. Tompkins.	
Casadero.	Clackamas.	514	1	38.3		57 23	15	3 22	9.12			1.56	5.8 20	4 7 20	e.	Alf Drill.
Condon.	Gilliam.	2,888	2	26.0		52 30	-5	3 26	0.61			0.13	5.5 12	5 11 15	sw.	C. H. Williams.
Connor Creek.	Baker.	1,800		27.1		46 24	-2	6 24	1.43			0.50	10.0 10	8 8 15	s.	R. C. Eisele.
Corvallis.	Benton.	600	21													Oregon Agricultural Coll.
Dayville.	Grant.	1,500	15	31.4	-4.3	57 23	-4	3 29	0.29	-1.20	0.10	3.7 4	12	7 12	se.	Dr. Campbell-Martin.
Doraville.	Columbia.	600	8	34.2		53 22	15	2† 19	7.88			1.70	20.2 23	2 4 25	se.	Jos. Hackenberg.
Drain.	Douglas.	300	7	39.8		59 12	14	3 32	6.37			1.65	1.5 21	1 23 8	sw.	Ira Wimberly.
Echo.	Umatilla.	625	5	29.4		57 30	1	3 33	1.18			0.53	2.5 8	7 6 18	w.	R. B. Stanfield.
Ella.	Morrow.	830	5	29.0		60 30	0	4 30	0.84	-0.50	0.22	5.0 10	8 6 17	sw.	C. F. Troedson.	
Eugene.	Lane.	449	20	37.9	-2.4	55 24†	16	3 ^j 26	3.49	-1.78	0.69	2.0 13	7 11 13	e.	F. L. Barker.	
Fairview.	Coos.</															

MONTHLY WEATHER REVIEW.

JANUARY, 1910

TABLE 1.—Climatological data for January, 1910. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Total snowfall unmeted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
				Mean.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.							
Oregon—Cont'd.																		
Joseph.	Wallowa.	4,400	21	16.7	-7.4	42	24	-13	3	25	2.04	+0.32	0.80	18.0	5	10	s.	
Le Grande.	Union.	2,754	24	25.5	-4.5	47	23†	-11	3	31	2.18	-0.23	0.42	20.0	14	5	10	sw.
Madras.	Crook.	2,150	1															
Marshfield.	Coos.	12	6	41.6	-3.4	19	3	57	21	25								
McKenzie Bridge.	Lane.	1,400	7	31.9	-4.2	51	13	6	3†	30	7.73	-2.06	0.0	21	3	1	27	sw.
McMinnville.	Yamhill.	180	22	37.9	-1.0	53	23†	15	5	21	7.48	+0.29	1.59	T.	20	5	4	22
Mikkalo.	Gilliam.	1,600	4	28.1		56	30	2	3†	23	1.07		0.27	5.0	8	18	3	10
Miramonte Farm.	Clackamas.	195	21	37.7	-1.0	56	23	14	5	20	7.02	+0.99	1.20	4.0	21	5	5	21
Monroe.	Benton.	350	13	38.8	-1.5	59	24	15	3	25	6.70	-0.73	1.13	0.0	15	3	5	22
Mount Angel.	Marion.	485	24	39.0	-0.6	57	23	17	3†	20	5.92	-0.95	0.92	4.5	13	10	5	16
Mount Hood.	Hood River.	1,650	29.7			53	22	0	3	36	6.44		1.90	4.5	13	7	19	e.
Mountain Park.	do.	1,550	4	27.6		51	30	5	3	36	8.95		1.50	44.0	22	4	3	24
Music.	Douglas.	5,000	26.1			56	23	-6	2	51	8.71		1.40	79.0	19	5	7	19
Newport.	Linton.	69	22	41.2	-3.4	53	24	21	3	19	12.20	+2.44	1.92	0.0	26	3	5	23
Pendleton.	Umatilla.	1,272	20	29.4	-4.5	58	24	1	3	33	1.83	+0.21	0.85	9.0	11	1	14	n.
Pilot Rock.	do.	1,872	1	39.2		62	23	-1	3	36	1.32		0.67	11.0	10	13 ^a	10 ^c	w.
Pompeii.	Clackamas.	3,580	15	27.8	-2.5	49	23	0	3	27	10.41	-0.05	1.66	55.0	17	3	11	17
Portland.	Multnomah.	57	38	37.6	-1.5	53	23	21	5	18	6.26	-0.31	1.47	2.1	22	2	5	24
Prineville.	Crook.	3,000	13															
Prospect.	Jackson.	2,750	4	32.6		55	30	4	3	39	5.19		0.80	21.0	15	4	15	12
Ramsey.	Wasco.	1,350																
Range.	Grant.	3,500	1															
Richland.	Baker.	2,350	8	24.2	-5.2	48	23	-12	5	30	0.55		0.20	5.0	4	7	5	19
Riverside.	Malheur.	3,000	11					-19	4†		1.15	-0.15	0.30	8.5	9	18	5	8
Roseburg.	Douglas.	523	33	39.2	-1.6	63	30	16	3	27	3.78	-1.92	0.64	2.0	18	4	11	16
Salem.	Marion.	120	20	38.7	-2.0	54	22†	10	3†	14	5.63	+0.01	1.10	2.0	20	5	0	26
Siskiyou.	Jackson.	4,115	1	27.8		45	23	8	2	21	5.23		0.36	23.0	21	2	11	18
Sparta.	Baker.	4,150	17	20.4	-5.2	40	23	-7	3	25	3.32	+0.23	0.70	33.0	12	8	11	12
Stafford.	Clackamas.	400	13	38.0	-1.0	55	23†	14	5	26	8.09	+1.60	1.19	65.0	21	10	0	21
The Dalles.	Wasco.	113	35	28.8	-3.6	59	30	2	4	40	1.87	-0.77	0.42	3.7	13	10	0	e.
The Heads.	Curry.	300	5															
Toledo.	Linton.	50	20	40.4	-2.0	58	1	17	3	31	9.60	-1.22	1.50	0.1	17	7	14	10
Umatilla.	Umatilla.	340	14	30.6	-2.0	59	30	7	3	26	0.98	-0.33	0.25	0.2	8	6	2	23
Vale.	Malheur.	2,450	18	19.6	-5.8	52	27	-23	3	43	0.93	-0.49	0.25	6.5	8	12	5	14
Van.	Harney.	3,506	4	20.0		42	22†	-25	3	43	0.89		0.26	6.0	5	13	4	14
Wallace Orchard.	Polk.	170	1	37.6		54	22†	14	14	19	6.64		1.12	2.0	21	2	10	19
Wallowa.	Wallowa.	2,035	7	16.0	-8.9	43	24	-25	3	42	1.57	+0.24	0.40	15.5	14	5	2	24
Wasco.	Wasco.	1,500	2	32.0		55	30	5	3	18	1.54		0.43	2.5	8	5	7	19
Warm Springs.	Crook.	1,600	8	29.4	-5.0	60	30	-2	3	29	0.51	-1.12	0.18	2.2	5	4	19	8
Weston.	Umatilla.	1,800	20	29.6	-2.3	55	22†	0	3	28	2.72	-0.06	0.42	13.5	12	1	5	25
Williams.	Josephine.	1,368	17	36.8	-2.6	56	31	12	5	28	3.92	-1.90	0.62	2.0	12	4	7	20

^a, ^b, ^c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

* Precipitation included in that of the next measurement.

** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.

† Also on other dates.

‡ Separate dates of falls not recorded.

§ Data are from standard instruments not supplied by the U. S. Weather Bureau.

|| Instruments are read in the morning: the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

||| Estimated by observer.

¶ Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for January, 1910. District No. 12, Columbia Valley.*

TABLE 2.—*Daily precipitation for January, 1910. District No. 12—Continued.*

Stations.	River basins.	Day of month.																																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total			
<i>Idaho—Cont'd.</i>																																				
Orofino.	Clearwater.		.03	.06		.12	.23	.10										.06	.40			.40	.10	.11	.13	.07		.53				.17	2.56			
Payette.	Payette.	22	T.			T.	27	.03	.08									.01	.01	.16		T.	.16	.11			.02		.09		T.		1.16			
Pebble.	Upper Snake.	80	.04			T.	.46	.15	T.	T.	.20						T.	T.	.90	T.	T.												2.64			
Pierson.	Salmon.	90	.57			*	*	.75	.75	.06								.46				T.	.04										1.97			
Pine.	Boise.	25	.25															*	* 44			.46		T.	.90			.20	.70				5.06			
Placerville.	do.																																			
Pleasant Valley.	do.	*	.45					*	*	*	.26						T.	.10		*	.02		*	*	.16	T.	*	T.		.02		1.01				
Pocatello.	Upper Snake.	64	.38	T.	.62	T.	T.	.06	.04	T.	T.						.03	.05	.18		T.											1.46				
Pocatello Nursery.	do.																																			
Poplar.	do.																																			
Porthill.	Upper Columbia.																	.01	.01	.01		.04	.02	.04	.15	.12	.11	.09	.15	.06	.01	.04	.40	.08	1.35	
Powers Ranch.	Boise.	46		.09		T.	.40		.20	.03							T.	.20			.20	.70	T.	.25			.60	.25						3.58		
Pyle Creek.	Payette.	65				T.	.28	.05	T.	.10							.07	.15			.62	.69		.21	.25	.12	.12	.25	.39					3.95		
Rattlesnake Creek.	Boise.	39	.07				.04	.36	.15	.13	T.						.03	.16	.02	T.		.14	.44		.12	.09	T.	.14	.30			2.64				
Ruby Creek.	do.	33	.12			T.	.40	.10	.16	.07							.06	.10			.26	.91		.03	.26	.12	.05	.40	.38				4.08			
Rupert.	Upper Snake.	42	.35		.01						.12	T.						T.	.18			T.	.07			.02							1.07			
Salmon.	Salmon.	21	.17			T.	T.		.03								T.	.07			T.	.14	T.	T.	.09		.02					0.80				
Salmon River Dam.	Middle Snake.	45	.27	T.	.03		.17			.76	.10										.21											1.20				
Sheep Hill.	Boise.	31																																3.88		
Shoshone.	Wood-Malad.	33	.20		T.	T.	.12	T.	T.								T.	.04	.02	T.		.11		.02	.02			.01	.06			0.97				
Silver City.	Cowiche.	03				T.	.02	.36	.02	.01	T.						T.	.09	.03		T.	.31		.10	.04	T.	.12	.07	.37	.11		1.68				
Smith Prairie.	Boise.		.70																	T.	.19											2.87				
Soldier.	Wood-Malad.																																			
Sugar |||.	Upper Snake.	90																																2.00		
Sunnyside |||.	Middle Snake.	10	.05																														0.45			
Tilden.	Upper Snake.	45	.50																														1.30			
Tripod Mountain.	Payette.	32	.08		T.	T.	.35	.05	.12	T.							.06	.02			.65	.30		.14	.15	.38	T.	.05				3.11				
Twin Falls.	Twin Falls.	26	.40		.03	.01	.16											.12	.08			.02										1.35				
Vernon.	Upper Snake.	30	.26																		T.	.18	T.	T.	.05						2.15					
Wallace.	Upper Columbia.		.06	.02	T.	.03	.09	.12	T.									.15	T.	.15	.15	.82	.73		.42	.29	.14	.56	.32	.30	.02		6.12			
Wendell.	Upper Snake.	29	.26																		T.												0.82			
<i>Washington.</i>																																				
Aberdeen.	Coast.		.02																																14.39	
Anacortes.	Puget Sound.																																			
Baker.	do.																																			
Bellingham.	do.																																			
Blaine.	do.																																			
Blewett.	Wenatchee.		.10	.10	.20	.03	.03											.40				.60	.10	.45									4.32			
Bremerton.	Puget Sound.																																			
Brewster.	Columbia.																																			
Bumping Lake.	Yakima.																																			
Cashmere.	Wenatchee.																																			
Cedar River.	Puget Sound.																																			
Centralia.	Coast.																																			
Cheney.	Spokane.	60																																		
Clealum.	Yakima.																																			
Clearbrook.	Puget Sound.																																			
Colfax.	Palouse.	10																																		
Colville.	Columbia.																																			
Conconully.	Okanogan.																																			
Cowiche.	Yakima.																																			
Crescent.	Spokane.		.09	.11	.05																													1.53		
Davenport.	Columbia.		.04	.06	.13																															
Dayton.	do.		.03	.15	.16	.04																												3.04		
Detroit.	Puget Sound.	10	.58		.27	.11	.05	.20										.05	.02	.73	.00	.16	.04	.01	.07	.22	.57	.88	.55	.54	.50	.02	.15	.75	11.58	
Dixie.	Columbia.	32																																6.44		
Duckabush.	Puget Sound.																																			
Ellensburg.	Yakima.																																			
Ephrata.	Columbia.																																		1.13	
Forks.	Fort Simcoe.																																	0.25		
Fort Simcoe.	Yakima.	42	.80	1.02	.36	.43	.31	.23									.79	.47	.02	.27	.01	.65	.70	.25	.78	.31	.40	.14	.52	.61	.94	.09	.07	.98	47	8.55
Goat Lake.	Puget Sound.	30																																		
Gold Creek.	Yakima.																																			
Granite Falls.	Puget Sound.																																			
Hatton.	Columbia.																																			
Huntsville.	do.																																			
Irene Mountain.	do.																																			
Kettle Falls.	Yakima.																																			

TABLE 2.—*Daily precipitation for January, 1910.* District No. 12—Continued.

TABLE 2.—*Daily precipitation for January, 1910. District No. 12—Continued.*

TABLE 3.—*Maximum and minimum temperatures at selected stations for January, 1910. District No. 12, Columbia Valley.*

Washington.

Date.	Aberdeen.				Blaine.				Colville.				Kosmos.				Lakeside.				North Head.				North Yakima.				Odessa.				Port Crescent.				Seattle.				Spokane.				Tacoma.				Tatoosh Island.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.									
1.	37	25	26	21	25	-2	35	15	25	14	37	26	16	35	24	33	26	16	17	24	33	26	19	23	17	33	27	30	19	23	17	33	27	37	31	31																
2.	38	27	34	13	25	-4	34	12	18	16	35	27	17	33	23	33	27	17	17	23	33	26	18	26	12	36	32	34	30	36	32	38	30	30																		
3.	32	21	31	16	18	-10	29	10	16	16	33	27	12	33	26	33	27	12	17	21	34	29	20	3	16	4	34	34	32	32	42	34	34																			
4.	38	17	33	12	11	-12	35	14	16	16	32	26	12	33	26	33	26	12	17	21	35	29	20	6	19	3	37	28	39	30	34																					
5.	38	19	32	23	14	-5	36	9	15	4	41	26	12	33	26	33	26	12	17	21	35	29	20	8	19	8	37	27	39	30	40																					
6.	36	30	34	18	15	2	35	11	15	4	42	33	22	26	22	26	22	12	12	22	29	27	19	9	17	3	37	25	42	32																						
7.	41	33	37	24	23	10	33	31	11	11	44	36	26	26	25	26	25	12	12	22	32	39	27	11	16	41	33	43	33	38																						
8.	38	30	41	34	26	4	33	29	14	14	40	35	28	28	25	30	25	12	12	22	32	34	27	12	42	33	42	34																								
9.	37	30	38	31	29	21	32	32	16	16	40	34	30	30	26	30	26	12	12	22	32	33	27	21	40	30	39	33																								
10.	36	31	34	27	24	11	31	23	20	13	40	34	30	30	18	30	18	12	12	22	32	31	24	19	27	18	38	29	38	36																						
11.	42	32	42	32	24	9	41	27	28	19	39	34	34	30	30	30	21	21	34	41	30	45	36	28	16	44	33	44	33	38																						
12.	44	36	42	39	26	5	49	37	31	19	42	39	30	31	31	31	31	21	21	34	31	45	38	18	30	44	35	43	40	49																						
13.	48	38	46	34	24	3	44	26	26	26	44	44	37	37	36	36	37	21	21	34	51	38	34	19	30	50	35	50	35																							
14.	39	32	42	32	34	6	35	26	24	24	42	34	35	33	33	33	33	21	21	41	29	45	36	22	36	43	34	43	38																							
15.	44	32	38	27	28	8	37	30	31	22	42	37	37	34	34	34	34	21	21	10	10	38	30	35	32	14	34	34	42	38																						
16.	44	36	35	27	29	23	36	31	30	24	45	34	34	20	20	20	21	21	21	14	14	39	30	42	38	24	30	26	43	34	42	37																				
17.	47	35	49	31	30	24	36	32	27	27	47	46	46	39	39	39	20	20	47	30	43	37	38	20	38	23	45	38	47	38																						
18.	48	35	45	38	42	29	38	29	45	24	47	47	39	46	46	46	46	21	41	39	47	33	45	37	46	34	41	36	44	34	47	35																				
19.	39	32	40	33	42	21	42	42	45	42	41	41	35	40	40	40	40	21	41	41	33	51	41	45	31	33	28	33	41	33	41																					
20.	45	36	43	34	36	18	42	36	31	18	47	37	37	21	44	44	21	21	44	23	42	30	50	37	42	33	39	24	47	35	47	41																				
21.	50	37	45	38	34	21	46	36	35	25	48	39	41	30	30	46	28	28	46	36	48	40	41	31	42	30	51	38	49	41																						
22.	51	42	49	44	39	28	51	39	34	38	49	45	41	27	45	45	30	30	50	40	45	45	43	30	54	50	49	45																								
23.	53	40	49	45	40	34	42	36	36	32	42	45	41	32	43	43	38	38	49	43	55	48	43	30	47	53	47	53	45																							
24.	53	36	50	41	49	34	51	32	42	34	46	46	42	34	49	49	35	35	46	34	48	48	47	36	47	39	51	35	51	38																						
25.	42	34	43	35	38	26	45	32	40	27	42	42	38	40	33	39	27	27	41	32	45	36	40	30	39	31	45	36	43																							
26.	46	36	45	37	43	23	43	30	41	28	46	37	43	19	45	29	45	33	44	37	46	34	38	31	45	38	44	39	40	39																						
27.	48	38	47	35	37	12	41	37	35	27	46	40	42	28	43	30	47	36	48	40	49	34	39	30	49	39	46	37																								
28.	44	30	44	37	41	25	40	30	42	30	47	34	47	31	41	23	41	28	46	34	46	34	40	30	45	33	41	36																								
29.	45	36	43	31	30	20	36	29	33	21	46	37	36	27	45	27	48	32	45	35	40	31	38	26	49	32	46	38																								
30.	48	31	45	40	48	28	35	33	39	27	46	37	58	30	46	27	45	33	49	37	56	34	47	37	50	35	44	37																								
31.	42	30	43	36	45	33	33	32	39	30	43	34	39	35	50	28	43	29	43	32	49	35	40	30	44	32	41	31																								
Mns	43.0	31.8	40.5	31.0	31.3	15.0	38.6	27.1	30.2	19.6	43.0	35.1	34.7	20.3	35.7	17.2	42.2	30.2	43.3	34.7	35.8	23.3	33.5	23.0	43.7	33.4	43.5	36.7																								

MONTHLY WEATHER REVIEW.

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TABLE 3.—Maximum and minimum temperatures at selected stations for January, 1910. District No. 12—Continued.

Date.	Oregon.												The Dalles.																	
	Walla Walla, Wash.			Ashland.			Baker City.			Eugene.			Gold Beach.			Hermiston.			Marshfield.			Portland.			Prineville.			Roseburg.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1	31	20	31	26	.....	45	27	30	29	23	42	30	38	28	.....	36	29	30	14	32	24	.....	.....	.....	.....	.....	.....
2	21	11	32	18	.....	37	21	21	32	15	39	28	34	24	.....	33	21	28	18	26	5	.....	.....	.....	.....	.....	.....
3	19	7	31	15	.....	34	16	27	26	2	44	19	28	21	.....	33	16	18	5	10	-23	.....	.....	.....	.....	.....	.....
4	21	10	36	12	.....	34	16	28	28	7	46	24	32	22	.....	35	22	18	2	22	-3	.....	.....	.....	.....	.....	.....
5	26	12	32	16	.....	36	19	23	33	6	45	26	32	21	.....	38	19	23	7	19	-12	.....	.....	.....	.....	.....	.....
6	16	7	41	27	.....	36	20	26	23	6	48	33	35	28	.....	41	31	25	11	12	-18	.....	.....	.....	.....	.....	.....
7	23	12	41	32	.....	43	34	41	26	10	47	37	44	30	.....	43	36	27	16	19	8	.....	.....	.....	.....	.....	.....
8	25	19	38	27	.....	44	34	35	28	8	54	35	40	31	.....	39	33	27	12	19	2	.....	.....	.....	.....	.....	.....
9	24	16	31	25	.....	43	31	31	30	16	46	32	34	29	.....	43	32	29	24	29	11	.....	.....	.....	.....	.....	.....
10	22	16	43	25	.....	44	30	39	28	17	43	30	34	30	.....	39	30	30	24	31	16	.....	.....	.....	.....	.....	.....
11	18	13	44	32	.....	39	31	38	25	17	48	30	37	30	.....	48	34	30	23	29	1	.....	.....	.....	.....	.....	.....
12	16	11	43	38	.....	49	35	44	23	17	56	37	34	30	.....	57	30	27	23	28	3	.....	.....	.....	.....	.....	.....
13	49	9	47	32	.....	53	27	35	31	15	45	32	42	32	.....	55	32	29	19	25	5	.....	.....	.....	.....	.....	.....
14	48	26	41	28	.....	39	27	33	33	12	46	35	45	32	.....	44	28	30	12	32	9	.....	.....	.....	.....	.....	.....
15	34	18	44	32	.....	45	33	38	40	8	44	40	48	35	.....	47	32	34	12	36	14	.....	.....	.....	.....	.....	.....
16	29	21	40	26	.....	49	36	39	30	27	45	37	43	35	.....	46	30	35	28	33	12	.....	.....	.....	.....	.....	.....
17	48	26	44	28	.....	44	35	39	41	18	47	37	46	35	.....	47	32	38	19	27	8	.....	.....	.....	.....	.....	.....
18	50	35	45	35	.....	43	35	43	47	38	48	49	47	38	.....	48	35	41	31	34	1	.....	.....	.....	.....	.....	.....
19	41	33	44	32	.....	46	35	33	47	30	53	35	45	34	.....	46	30	42	29	38	22	.....	.....	.....	.....	.....	.....
20	41	30	56	27	.....	45	29	35	43	25	53	34	44	37	.....	37	28	38	20	30	2	.....	.....	.....	.....	.....	.....
21	52	30	56	45	.....	46	29	48	40	31	57	50	52	39	.....	61	37	38	30	34	10	.....	.....	.....	.....	.....	.....
22	58	35	59	45	.....	47	36	51	44	30	56	51	50	41	.....	55	45	41	33	37	31	.....	.....	.....	.....	.....	.....
23	61	44	60	46	.....	52	40	44	45	36	55	45	53	47	.....	54	45	39	34	39	32	.....	.....	.....	.....	.....	.....
24	57	38	47	33	.....	55	39	38	45	36	45	38	48	40	.....	47	35	45	33	43	30	.....	.....	.....	.....	.....	.....
25	46	36	37	29	.....	44	35	33	46	31	41	35	44	37	.....	43	34	41	26	39	12	.....	.....	.....	.....	.....	.....
26	46	38	41	28	.....	45	38	40	51	33	49	36	46	38	.....	48	34	43	27	42	15	.....	.....	.....	.....	.....	.....
27	51	39	40	34	.....	47	37	45	45	28	50	41	50	41	.....	48	42	41	34	33	9	.....	.....	.....	.....	.....	.....
28	46	34	48	36	.....	48	36	42	51	36	51	41	47	35	.....	45	41	46	34	40	28	.....	.....	.....	.....	.....	.....
29	52	32	48	36	.....	45	37	36	44	25	49	37	49	33	.....	54	39	40	29	38	0	.....	.....	.....	.....	.....	.....
30	59	47	54	36	.....	48	34	42	60	32	53	38	52	34	.....	63	44	59	33	33	13	.....	.....	.....	.....	.....	.....
31	52	27	53	29	.....	55	32	34	49	35	38	37	38	33	.....	47	28	51	38	36	12	.....	.....	.....	.....	.....	.....
Mean.	38.1	24.3	43.6	30.2	.....	44.7	31.1	37.1	37.7	21.4	47.8	35.3	42.3	32.8	.....	45.9	32.4	34.9	22.6	31.0	8.2	.....	.....	.....	.....	.....	.....